

Please REPLACE the paragraph at page 62, line 4, with:

When the working range amount is calculated in such a manner as described above, the evaluation result management section 25 calculates a workability evaluation result for the working range amount and registers the workability evaluation result of the calculation into the evaluation result data storage section 13 (step B38). Then, the general controller 21 reports the process till then (for example, the result of confirmation of the arrival route of the working means model, the result of confirmation of calculation of the working range amount and the result of evaluation of the workability) as a simulation result through the printing apparatus not shown, the monitor 14 and so forth (step B19).

IN THE CLAIMS:

Please REPLACE and ADD to the claims in accordance with the following:

1. (ONCE AMENDED) A simulation apparatus for simulating, based on design information of a design model designed in a virtual three-dimensional space while one or more standard part models standardized in advance based on a specification model are arranged in the design model, working for the standard part models arranged in the design model, comprising:
 - a working means model information storage section for storing working means model information which indicates details of a working means model to be used in working on the one or more standard part models, said working means model information being linked with standard part model information which indicates details of the one or more standard part models;
 - a working means model information extraction section for automatically referring, based on information regarding the standard part models arranged in a design model, to said working means model information storage section to extract information regarding a working means model to be used to work the standard part models arranged in the design model; and
 - a working simulation execution section for executing a simulation of the working for the standard part models with the working means model based on design information of the design model and the information regarding the working means model extracted by said working means model information extraction section.

7. (ONCE AMENDED) A simulation apparatus as claimed in claim 2, further comprising a workability evaluation coefficient storage section for storing, for the working means model included in the same attribute, a workability evaluation coefficient which is referred to for evaluating a workability of the working means model, and a workability evaluation section for evaluating the workability based on a result of execution of the working simulation by said working simulation execution section and also based on the workability evaluation coefficient stored in said workability evaluation coefficient storage section.

11. (ONCE AMENDED) A simulation apparatus as claimed in claim 7, wherein said working means model information storage section stores information of a plurality of reference positions for any working means model which allows operation thereof in a plurality of different methods and said working simulation execution section executes a working simulation according to the plurality of operation methods while said workability evaluation coefficient storage section stores a workability evaluation coefficient which is referred to for evaluating a workability for each of the operation methods of the working means model, and said workability evaluation section evaluates the workability of the working means model for the each of the working methods based on a result of execution of the working simulation according to the working method and also based on the workability evaluation coefficient stored for the operation method of the working means model in said workability evaluation coefficient storage section.

13. (ONCE AMENDED) A simulation method for simulating, based on data regarding a design model displayed in a virtual three-dimensional space and designed while one or more standard part models standardized in advance based on a specification model are arranged in the design model, workability according to a working means model used to work the standard part models arranged in the design model, comprising:

providing working means model information, which indicates details of a working means model to be used in working on the one or more standard part models, and standard part model information, which indicates details of the one or more standard part models, said working means model information being linked with said standard part model information;

automatically acquiring the working means model, which is to be used in working on the individual standard part model, based on said working means model information linked with said standard part model information that indicates the details of the last-named individual standard part model;

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executing a simulation of working to be performed for the standard part models using the acquired working means model information; and
displaying a process of the execution of the simulation in a virtual three-dimensional space.

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22. (ONCE AMENDED) A computer-readable recording medium having a simulation program recorded thereon for causing, in order to cause a computer to execute, based on design information of a design model designed in a virtual three-dimensional space while one or more standardized standard part models are arranged in the design model, a simulation of working with a working means model used to work the standard part models arranged in the design model, the computer to implement:

a function of providing working means model information, which indicates details of a working means model to be used in working on the one or more standard part models, and standard part model information, which indicates details of the one or more standard part models, said working means model information being linked with said standard part model information;

a function of automatically acquiring said working means model information, which is to be linked with the working means model to be used in working on the individual standard part models used upon designing of a design model;

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a function of executing a simulation of working to be performed for the standard part models based on the acquired information of the working means model; and

a function of displaying a process of the execution of the simulation in a virtual three-dimensional space.

23. (ONCE AMENDED) A designing supporting apparatus, comprising:

a standard part model information storage section for storing standard part model information regarding one or more standard part models standardized in advance based on a predetermined specification model; and

a designing supporting section for arranging one or more standard part models to perform supporting for designing a subject in a virtual three-dimensional space;

said designing supporting means including an attribute information extraction section for referring to said standard part model information storage section to automatically extract attribute information of a working means model to be used to work the standard part models

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arranged in the subject designed in the virtual three-dimensional space, and a design data outputting section for outputting data regarding the subject designed in the virtual three-dimensional space and data regarding the attribute information extracted by said attribute information extraction section as design data, said attribute information including working means model information, which indicates details of a working means model to be used in working on the one or more standard part models and which is linked with said standard part model information.

24. (ONCE AMENDED) An apparatus for simulating work upon a model, comprising:
a main model comprised of a workable component model;
a working model, separate from the main model, capable of working the workable component model in a virtual three-dimensional space according to working requirements of the working model;
arrangement information describing an arrangement of the working model when it is working the component model; and
a processing unit automatically determining whether the arranged working model can work the component model, by automatically comparing the arrangement information and the working requirements of the working model to the main model.

25. (ONCE AMENDED) The apparatus according to claim 24, wherein the processing unit also determines whether the working model can be moved in the virtual three-dimensional space to its arrangement without interference between the moving working model and the main model.

26. (ONCE AMENDED) The apparatus according to claim 25, wherein orientation information is associated with the component model, and determining whether the working model can be moved in the virtual three-dimensional space to its arrangement further comprises determining whether the working model can approach the component model according to the orientation information, without interference from the main model.

27. (ONCE AMENDED) A method for simulating, comprising:
arranging a working model into a working arrangement, according to an arrangement of a component model of a main model; and

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automatically determining whether the working model, as arranged in its working arrangement, can work upon, in virtual three-dimensional space, the component model, by using the main model and working requirements of the working model to automatically simulate the working model working upon the component model.

28. (ONCE AMENDED) The method according to claim 27, further comprising determining whether said arranging can be performed without interference between the main model and the working model.
